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ABSTRACT

This monograph addresses issues concerned with modifications of general education instructional procedures and curriculum for students with emotional or behavioral disorders. It begins by defining the general education curriculum and presenting information on how students with E/BD currently fare, both academically and socially, compared to peers without disabilities. It then reviews the literature regarding efforts to modify and adapt curricular materials for students with E/BD. This is followed by discussion of the limitations of the intervention efforts validated to date and a proposal for the development of more global intervention approaches with a more generalized effect on student performance. Modifications to classroom instructional interactions and supplemental curricular materials are suggested, such as interspersing tasks that children can do well with more difficult or aversive tasks and supplemental reading intervention. The Phonological Awareness Training for Reading program is highlighted and examples of materials and instructional techniques are offered throughout. (Contains approximately 100 references.) (DB)

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About the Council for Children with Behavioral Disorders

Council for Children with Behavioral Disorders

CCBD is an international and professional organization committed to promoting and facilitating the education and general welfare of children and youth with behavioral and emotional disorders. CCBD, whose members include educators, parents, mental health personnel, and a variety of other professionals, actively pursues quality educational services and program alternatives for persons with behavioral disorders, advocates for the needs of such children and youth, emphasizes research and professional growth as vehicles for better understanding behavioral disorders, and provides professional support for persons who are involved with and serve children and youth with behavioral disorders.

In advocating for the professionals in the field of behavioral disorders, CCBD (a division of The Council for Exceptional Children) endorses the Standards for Professional Practice and Code of Ethics adopted by the Delegate Assembly of The Council for Exceptional Children in 1983.

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Foreword

Today, we find ourselves in the midst of difficult and uncertain times. Circumstances place some at greater risk than others. For example, a rapidly changing political and economic climate poses threats to children and youths who manifest noncompliance, antisocial behavior, or acting-out behavior. In addition, it is clear that recent federal legislation (i.e., No Child Left Behind and the Individuals with Disabilities Education Act) will have a major impact on the landscape of both general education and special education. Both of these Acts contain a number of positive provisions; however, they also have raised questions among those who serve students identified as *emotionally disturbed, behaviorally disordered,* or *emotionally and behaviorally disordered.* The long-term ramifications are difficult to predict, but there is little doubt that there will be far-reaching effects on the preparation of special education personnel, the nature and scope of programs and services they provide, and the specific population of students they serve.

In light of mounting challenges to serving children and youths with emotional and behavioral disorders (E/BD), it is good to know that there are a growing number of practices that have compelling empirical evidence for their effectiveness. The Council for Children with Behavioral Disorders (CCBD) is committed to putting established practices in the hands of its members and supporting efforts to increase the quality of the education and treatment of students with E/BD and their families. The authors of this series discuss in detail a range of evidence-based strategies, procedures, and models that are appropriate for early intervention programs, public and private schools, day and residential treatment programs, correctional

facilities, and other settings in which are students with E/BD are educated.

The following seven volumes comprise the Fifth Mini-Library Series on children and adolescents with E/BD. Their content stems from the 2003 international conference sponsored by the Council for Children with Behavioral Disorders:

- *Critical Issues Facing Youths with Emotional and Behavioral Disorders During Transition to Adulthood* by Mary E. Morningstar and Debra Benitez
- *Inclusive Education for Children and Youths with Emotional and Behavioral Disorders: Enduring Challenges and Emerging Practices* by Beverley H. Johns, Eleanor C. Guetzloe, Editors, and others
- *Differentiating Curriculum and Instruction on Behalf of Students with Emotional and Behavioral Disorders Within General Education Settings* by Carol Ann Davis, Kathleen L. Lane, Kevin Sutherland, Phillip L. Gunter, R. Kenton Denny, Phillip Pickens, and Joseph Wehby
- *Educating Juveniles with Disabilities in Correctional Settings* by Joseph Calvin Gagnon and Matthew J. Mayer
- *Establishing Exemplary Personnel Preparation Programs for Teachers of Students with Emotional and Behavioral Disorders: Partnerships with Schools, Parents, and Community Agencies* by Alec F. Peck, Sandy Keenan, Douglas Cheney, and Richard S. Neel
- *Serving Culturally and Linguistically Diverse Students with Emotional and Behavioral Disorders* by Festus E. Obiakor, Stephen Enwefa, Cheryl Utley, Sunday O. Obi, Nomsa Gwalla-Ogisi, and Regina Enwefa
- *Prevention and Early Intervention for Young Children at Risk for Emotional and Behavioral Disorders* by Maureen A. Conroy, Editor, and others

In putting together this series, we have relied on the knowledge and skill of a diverse group of dedicated professionals, each of whom is directly involved in the education and treatment of children and youths with emotional and behavioral disorders. We are grateful that they were willing to share their time and expertise and are confident that their work will contribute to improving the quality of intervention efforts for these students.

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Preface

Prompted by recent federal legislation (e.g., Individuals with Disabilities Education Act [IDEA] of 1997; No Child Left Behind Act of 2002), the inclusion of students with disabilities in general education classrooms, curricula, and assessment activities has become a major focus of those responsible for educational programs. For example, the No Child Left Behind Act requires that "95% of students with disabilities in a school participate in state assessments with appropriate accommodations or alternative assessments" (National Association of State Directors of Special Education [NASDSE], 2002, p. 4). In addition, prestigious groups such as the President's Commission on Special Education have offered a glimpse into the future of what special education might look like by suggesting that we consider children with disabilities first as general education students.

In the following discussion, we address issues that relate to how emerging educational concepts and ideals might be realized for students with emotional or behavioral disorders (E/BD) through modifications of general education instructional procedures and curricula. We begin by defining the general education curriculum and presenting information on how students with E/BD currently fare, both academically and socially, compared to their peers without disabilities. We briefly review the literature regarding efforts to modify and adapt curricular materials for students with E/BD. Next, we point out some of the limitations of the intervention efforts validated to date and then argue for the development of more global intervention approaches with a more generalized impact on student performance. We present modifications to classroom instructional

interactions and supplemental curricular materials, offering examples of material and instructional techniques that have the potential to address more students who need modifications to help them acquire knowledge from the general curriculum.

1 Introduction

The General Education Curriculum and Students with Emotional and Behavioral Disorders

Defining a Curriculum

Difficulties in implementing recent legislative actions first arise when we attempt to define their components. For example, it is necessary to define the general education curriculum before ensuring that we use it to educate students with disabilities. As Jitendra (2001) pointed out, identification of the general curriculum is difficult. She presented three aspects of curriculum to consider: intended curriculum, enacted curriculum, and learned curriculum. The *intended curriculum* is the official or adopted curriculum of the state or district; the *enacted curriculum* is what teachers do and the materials they use in the classroom; and the *learned curriculum* is what students have actually accomplished. Jitendra indicated that classroom practitioners regard textbooks in the enacted curriculum as one, if not the primary, teaching tool in elementary and secondary classrooms. That is to say, the majority of instruction is based on the content of commercial textbooks.

Modifying Curriculum for Students with Disabilities

In further examining classroom instruction, Jitendra (2001) and her colleagues asserted that textbooks adopted for general education often lack attributes that would result in successful academic achievement for students with learning difficulties. For example, Gleason and Isaacson (2001) evaluated basal textbooks for writing instruction. They found that the problems were not what the texts provided for instructional support for students having learning difficulties but what the textbooks did not provide. They found little support for teacher modeling behavior, structured review opportunities for students, teacher direction for translating instruction into sentences, or opportunities for students to learn and practice new skills. For each of the commercial textbooks reviewed, they made some recommendations for modifications to accommodate students with learning difficulties.

Questions sometimes arise regarding what constitutes an accommodation versus an adaptation. Simply put, accommodations are strategies designed to assist the student in accessing the general education classroom or curriculum and are spelled out in the student's individualized education program (IEP; Hedeen & Ayres, 2002, p. 181). In contrast, adaptations are changes to curricular content or to expected student learning outcomes, or both (Hedeen & Ayres, 2002). In a review of accommodations and adaptations for students with disabilities recommended by Deschenes, Ebeling, and Sprague (1994), Gunter, Denny, and Venn (2000) presented ways these accommodations and adaptations might be applied to instruction of students with emotional or behavioral disorders (E/BD). They included accommodations and adaptations of size, time, level of support, input, difficulty, output, participation, and alternative curricular goals and, finally, use of a substitute curriculum. Documentation of the effectiveness of these modifications for many students with disabilities is readily available (c.f., Gunter et al., 2000); however, much of the literature on successful inclusion of students with disabilities into the general education curriculum has

focused on students with disabilities other than E/BD (c.f., Fisher & Frey, 2001).

Challenges in Teaching Students with Emotional or Behavioral Disorders

Approximately 1% of school-age youths receive special education services under some variation of the label *emotional disturbance* (IDEA, 1997), with state prevalence estimates ranging from 0.03% to 1.7% (Walker, Colvin, & Ramsey, 1995). However, some researchers estimate that 2% to 4% of school-age youngsters could receive services under this label (Bullis & Cheney, 1999). This is an alarming figure considering that students with E/BD are among the most difficult to teach compared to general education students and students with other disabilities (e.g., learning disabilities, mild mental retardation). Indeed, by definition, students with E/BD exhibit behavioral challenges and academic deficits.

Behavioral Challenges

In terms of behavioral challenges, students with E/BD exhibit both externalizing (e.g., aggression, coercion) and internalizing (e.g., depression, anxiety, somatic complaints) behavior problems (Achenbach, 1991). However, the externalizing behaviors are more apt than internalizing behaviors to capture teacher attention, since they are more likely to impede classroom instruction (Lane, in press). Externalizing behaviors are more stable than internalizing behaviors across time and are more resistant to intervention (Kazdin, 1993). Furthermore, externalizing behaviors are highly predictive of academic deficits (Nelson, Benner, Lane, & Epstein, 2003) and conduct disorders during the school years (Patterson, 1993) as well as a host of negative outcomes in adulthood (Bennett et al., 1999).

Academic Deficits

Student acting-out behaviors have long been of concern to the research and teaching communities; considerably less attention has

been devoted to the academic deficits of students with E/BD. This is surprising given that the prevalence rates of academic achievement deficits among students with E/BD range from 25% to 97% (Greenbaum et al., 1996; Mattison, Hooper, & Glassberg, 2002). In addition, adolescents with E/BD have a higher incidence of comorbid academic achievement deficits (e.g., reading, math) compared to children with learning disabilities (Nelson et al., 2003). In sum, students with E/BD characteristically evidence a wide range of behavioral and academic problems. Although teachers may be tempted to focus primarily on the behavioral concerns, it is important to attend to these students' academic needs as well (Lane & Wehby, 2002).

Review of Research on Instructional and Curricular Modifications

Much of the current research on classroom instruction of students with E/BD suggests an inverse relationship between increases in academic performance influenced by effective teaching or effective manipulation of antecedent variables and occurrences of undesirable student behaviors (e.g., Dunlap et al., 1993; Gunter & Reed, 1997; Gunter, Shores, Jack, Denny, & DePaepe, 1994; Kern, Bambara, & Fogt; 2002; Sutherland & Wehby, 2001a). For example, Dunlap and colleagues (1993) evaluated the usefulness of functional assessment procedures to identify curricular modifications for students with E/BD. Most recently, Kern and colleagues (2002) evaluated the impact of two such curricular modifications—offering a choice of academic tasks to complete and ensuring that items of high student interest are embedded into tasks—on the engagement and disruptive behavior of a classroom of six students identified with severe emotional disturbance. These researchers found that for the group of students ages 13 and 14, the combined curricular modifications resulted in greater achievement and less undesirable social behavior. These findings appear to be representative of this line of investigation.

Despite the encouraging findings on the use of curricular and materials modifications for students with E/BD, Miller, Gunter, Venn,

Hummel, and Wiley (2003) expressed caution regarding the overgeneralization when implementing these procedures. They evaluated the effects of two modifications on the academic performance and task engagement of three students with E/BD and found that the modifications alone did not result in adequate behavior change. Shortened assignments and functional writing tasks had little impact until students were provided models demonstrating how these modifications could be used. This suggests that students may need to be directly taught how to use the modifications. Following Miller and colleagues' review of available research on modifications for students with E/BD, they concluded that there is a need for continued evaluations to better understand the isolated effects of variable instructional manipulations. The work of Helwig and Tindal (2003) further underscores that need. They reported that general and special education teachers were no better at predicting which students would benefit from testing accommodations (e.g., read items aloud to students) than would be expected to occur by chance. That is not especially encouraging.

A great deal of work has focused on the relationship of modifications to classroom instruction and their impact on desirable and undesirable behaviors of students with E/BD. In one such study, Gunter and colleagues (1994) evaluated the impact of modifying the teacher's instructional behavior on the disruptive behaviors of a student in elementary school identified with E/BD. They found decreases in the student's rate of disruption that were directly proportional to the increases in the teacher's use of the simple, effective instructional practice of modeling desired behavior. In another study, Gunter and Reed (1997) evaluated teachers' use of written scripts to ensure that verbal modifications for instructional delivery were consistent. They found that use of scripts not only reduced disruptive behaviors, but also led to concurrent increases in correct academic responding and teacher praise statements following those responses.

In the following sections, we provide an in-depth discussion on instructional and curricular modifications that might be required to enhance the academic performance of students with E/BD. First, we present a transactional model for understanding and modifying

classroom instructional interactions between teachers and their students with E/BD. Related to this model, we present evidence and suggestions for using strategies to enhance instructional momentum by modifying instruction to intersperse high-probability learning trials into more difficult academic material. Finally, we discuss the impact of a supplemental reading program (i.e., alternative curriculum) on the academic and social performance of students with E/BD.

2 Modifications in Delivery of Classroom Instruction

Transactional Model of Interactions

Transactions occur when one individual is influenced by another's behavior to do something that he or she otherwise may not have done (Sameroff, 1983). In applying the transactional model of development, we see the child as a product of the ongoing interaction between the child and the experience provided by the environment, such as the family and social context (Sameroff, 1995). The child is shaped by the environment, and at the same time the child's behavior produces changes in the environment.

The application of this model to classrooms that include students with E/BD appears to have some relevance, particularly given the academic and behavioral challenges these students often present. Both Carr, Taylor, and Robinson (1991) and Wehby, Symons, Canale, and Go (1998) documented that teachers avoided interacting with students who exhibit the most problematic behavior, while choosing to engage in more instructional interactions with students who exhibit more appropriate behavior. Furthermore, teachers may

engage in fewer instructional interactions with lower-achieving students, regardless of whether the students exhibit disruptive classroom behavior, because the greater difficulty in teaching them is less reinforcing to teachers (Greenwood, 1996). In either case, the student is affected by his or her impact on the classroom environment, represented in this case by less exposure to academic material. Where the transactional model is useful in looking at the education and treatment of students with E/BD, particularly for teachers, is in its application to teacher/student interactions in the classroom.

Reciprocal Nature of Teacher/Student Interactions

Several studies have addressed the potential reciprocal nature of interactions between teacher behavior and student behavior. First, using time-lagged data in a path analysis, Skinner and Belmont (1993) found that students who self-reported more engagement received more positive teacher responses, according to teacher reports, while students who were less engaged received more coercive responses from teachers, were neglected more, and were treated with less consistency. Based on their perceptions of student engagement and actual student behavior, teachers either promoted further classroom engagement of students who were engaged or interacted with students who were not engaged in a way that increased the likelihood of further disengagement. Skinner and Belmont described these effects as "magnificatory." That is, positive student engagement elicits positive teacher behavior, while negative student engagement elicits negative teacher behavior.

These results provide some insight into the findings of studies conducted by Van Acker, Grant, and Henry (1996) and Nelson and Roberts (2000). Van Acker and colleagues found that students identified as at medium risk for aggression were provided more opportunities to respond (OTR), were given more teacher praise, and had higher rates of correct response than students identified as at high risk for aggression. Furthermore, students in the high-risk group were twice as likely to receive a teacher reprimand for inappropriate behavior as students in the medium-risk group. Nelson and

Roberts found that teacher/student interactions following disruptive behavior were longer, as represented by the number of event sequences, for disruptive students (identified by teachers) than interactions for less-disruptive students following disruptive behavior. In addition, teachers were significantly more likely to provide redirections following less-disruptive students' disruptions, in contrast to being more likely to provide reprimands following disruptive students' disruptions. Not surprisingly, less-disruptive students were significantly more likely to comply with teacher requests, while disruptive students were significantly more likely to respond negatively to teacher requests.

Teacher behavior reported in both the Van Acker and colleagues' and Nelson and Roberts' studies may have magnified the classroom behavior of students in the two groups, much as Skinner and Belmont (1993) found previously. Teachers may have created a classroom context that supported prosocial responses of students in the medium-risk/less-disruptive groups, while inadvertently promoting inappropriate classroom behavior by students in the high-risk/disruptive groups. Initial teacher perceptions may have been confirmed by the students' classroom behavior, triggering a continuation of interactions based, in part, on those perceptions.

Relationship Between Instructional Variables and Academic Outcomes

The work of Skinner and Belmont (1993) also may be applied to discussion on academic interactions between teachers and students. To illustrate, research conducted at the Juniper Gardens Children's Project by Greenwood and colleagues (Greenwood, Delquadri, & Hall, 1984; Greenwood, Hart, Walker, & Risley, 1992), and ultimately the performance-based model of instruction (Greenwood, 1996), offers insight into the relationship between classroom instructional variables and student academic outcomes. That is, the work of Greenwood and colleagues strongly suggests that poor academic instruction may contribute to the poor achievement of students from inner-city, low socioeconomic status (SES) schools. They found that instruction in inner-city classrooms was not discriminative for rein-

forcement and that students had infrequent opportunities to respond. The cumulative effect of this instruction was lower rates of academic behavior and lower rates of academic growth and achievement in comparison to students from higher-SES schools (Greenwood et al., 1992). Findings indicated that lower exposure to academic behaviors and lower engagement in academic behaviors played a major role in explaining the gap in achievement between low- and high-SES students.

Drawing upon his previous research, Greenwood (1996) hypothesized that engagement mediates the relationship between academic instruction (comprised of exposure and task quality) and outcomes. The findings of Skinner and Belmont (1993) would then suggest that students' levels of engagement will predict the quality of instruction that they receive in the future. That is, students who are engaged, or perceived by teachers to be engaged, during academic instruction may be treated differently by teachers than students who are not engaged. This differential treatment may manifest itself in increased exposure to academic material (i.e., increased rates of OTR), superior task quality, and/or increased attention. Meanwhile, less engaged students may receive less exposure to academic material, inferior task quality, and/or more negative and coercive attention.

Recent research in classrooms for students with E/BD provides support for the transactional model of social interactions, particularly during academic instruction. Sutherland, Alder, and Gunter (in press) investigated the effects of increased OTR on disruptions, task engagement, and correct responses in a classroom of elementary students with E/BD (Kazdin, 1982). Data indicated that when the teacher increased his rate of OTR provided for students his praise also increased slightly, students' correct responses and task engagement increased, and students' disruptive behaviors decreased. Of particular interest was how teacher behavior may have shaped, and been shaped by, student behavior, particularly in relation to the performance-based model (Greenwood, 1996). The percentages of correct responses (PCR) across the four phases of this study were 72%, 76%, 56%, and 74%, respectively. Thus, when an observation/feed-

back intervention designed to increase the teacher's rate of OTR was withdrawn, not only did the teacher's rate of OTR (exposure) decrease, but also the difficulty level (task quality) of his OTR seemed to have increased, resulting in a lower PCR (measure of instruction). Student frustration that stemmed from more difficult OTR and lower PCR may have led to even more challenging classroom behaviors, further impacting the teacher's instructional behavior.

In another study on teacher/pupil interactions, Sutherland, Wehby, and Yoder (2002) hypothesized that teachers would be reinforced by the correct responses of students with E/BD and that this reinforcement would be reflected in the use of teacher praise. Teacher praise would then occasion the further presentation of OTR to promote continued correct responses. Results indicated that OTR followed teacher praise statements within 5 seconds, at a rate greater than chance. Further analyses indicated that when a teacher praised a student the student was more likely to provide an OTR within 5 seconds than when a teacher did not give a praise statement for a correct response. It appears that factors unique to the correct responses that elicited teacher praise may have contributed to an increased likelihood of further OTR. This effect, like the results reported by Skinner and Belmont (1993), might best be characterized as *magnificatory;* that is, increased OTR may lead to positive outcomes such as increased task engagement and improved academic achievement (Sutherland & Wehby, 2001a).

Increasing Classroom Effectiveness

Assuming that our observations are correct, the challenge for school personnel is to determine how to increase effective classroom practices that will help magnify the success of all students, regardless of their academic achievement or classroom behavior.

The research on reciprocal relations in classrooms suggests that the differential attention provided unwittingly by teachers is based, at least in part, upon their perceptions of students' academic achieve-

ment and classroom behavior (e.g., Carr et al., 1991; Skinner & Belmont, 1993). To combat this phenomenon, teachers must (a) be reflective and (b) increase opportunities for all students to respond actively. In the next section, we highlight several validated approaches for accomplishing these two goals.

Fostering Teacher Reflectiveness

We have singled out two practical strategies for fostering reflection on the part of teachers: observation/feedback and self-evaluation. Observation/feedback (or peer coaching) is a powerful tool that can provide teachers with information about their instructional practices. Hasbrouck (1997) identified the following three conditions under which observation/feedback appears to be most successful:

1. Structuring observations using objective and descriptive recordings of teacher behaviors rather than more anecdotal, subjective evaluation.
2. Training the observer to reliably code teaching behaviors.
3. Debriefing and goal setting, leading to goal-directed teacher behavior, which is more likely to effect change and improvement.

Sutherland and colleagues (in press) found that having a teacher set a goal and graph his or her progress toward achieving that goal resulted in an increased rate of OTR with concurrent improvements in the behavior and academic achievement of students with E/BD.

Various authorities have advocated the use of videotaped instruction to allow teachers of students with E/BD to self-evaluate their instructional behavior (Gunter, Denny, Jack, Shores, & Nelson, 1993; Gunter & Reed, 1996; 1997). The use of videotaped instruction allows teachers to observe not only their own behavior, but also the behavior of their students. For example, the protocol developed by Gunter and Reed (1996) allows teachers to evaluate themselves on the rates of instructional mands (i.e., to-do statements) and mands with information, praise, and attention to disruption while also measuring rates of their students' compliance, correct responses,

and disruptions. While self-evaluation of videotaped lessons can improve teachers' instruction, audiotaping samples of instruction may also provide insight into teaching behaviors, such as providing OTR. In fact, results from a study conducted by Sutherland and Wehby (2001b) suggest that a self-evaluation intervention using audiotaped samples of instruction can have positive effects on teacher praise and students' correct academic responses.

Increasing Active Student Responding

Heward (1994) argued that active student responding "is the most direct measure of a student's academic responding during instruction" (p. 289). He suggested three particular benefits of increasing active student responding: It generates more learning, provides critical feedback to the teacher, and correlates with increased task engagement. To increase academic responding, teachers must increase OTR. Several validated strategies for increasing OTR have been reported in the literature.

The teacher reduction of so-called intertrial intervals (ITI), the time between the end of one learning trial and the beginning of the next trial, can increase student task engagement, academic responding, and accuracy (Carnine, 1976). Skinner, Fletcher, and Henington (1996) acknowledged that while reducing ITI may not increase the quality of instruction, increasing the pace of instruction may increase students' learning rates because of the increased number of learning trials.

Choral responding (i.e., students responding in unison) is another way for teachers to increase OTR and active responding (Heward, 1994; Skinner et al., 1996). Choral responding has been associated with increases in student participation and correct responding and with concomitant decreases in off-task behavior (Sainato, Strain, & Lyon, 1987).

The use of response cards is another classroom option. Response cards are cards or other items that all students hold up at the same time to display their response to a given OTR (Heward, 1994; Skinner et al., 1996). The use of response cards can significantly

increase active responding (Narayan, Heward, Gardner, Courson, & Omness, 1990) and at the same time decrease disruptive behavior (Armendariz & Umbreit, 1999).

Finally, the work of Greenwood and colleagues (1984; 1992) and Fuchs and colleagues (2001) has clearly demonstrated the effectiveness of various peer-mediated interventions (e.g., classwide peer tutoring and peer-assisted learning strategies, respectively). However, given the social skills deficits of students with E/BD, any strategy that involves peer interactions, such as peer tutoring or cooperative learning, should also include assessment and instruction in specific social skills and cooperative behaviors (Sutherland, Wehby, & Gunter, 2000).

As we mentioned previously, transactions occur when one person is influenced by another's behavior to do something that he or she otherwise may not have done. There is mounting evidence regarding the reciprocal nature of interactions between teachers and students with E/BD, particularly during coercive interactions. Emerging research documents the existence of reciprocal relations during academic interactions between teachers and students with E/BD. This is a critical issue in teaching students with E/BD; an unintended but significant consequence of reciprocal relations may be differential teacher treatment of students, with the students who need the most attention being neglected (Greenwood et al., 1984). One consequence of this form of instructional neglect may be reduced OTR for students who are at the greatest risk for academic and social failure. It follows that supporting teachers both to be more reflective and to use instructional methods that increase OTR can help address differential distribution of teacher attention and result in positive outcomes for all students.

3 Interspersed High-Probability Requests

Related to the issue of teacher/pupil instructional interactions is a set of procedures that entails interspersing tasks that children can do well (i.e., have previously mastered and have a history of reinforcement) with tasks they do not do well, are new and difficult, or are perceived by the students as aversive. This general format has been used in several ways and can be found in the literature in terms of high-probability requests, interspersed requests, and task variation. In this section, we provide a brief description of the strategies, along with examples of various applications and, finally, some more general considerations regarding the classroom use of such strategies.

High-Probability Requests

The use of high-probability (high-p) or interspersed requests requires that the teacher deliver three to five requests to which the student has a history of complying immediately, prior to making a request to which the student typically does not comply (the low-probability request). High-p requests are easy and quick to complete and produce positive reinforcement for the student who responds appropriately to each of them. High-p request sequences can be effective in increasing task demands for adults with developmental

disabilities (Mace et al., 1988; Zarcone, Iwata, Mazaleski, & Smith, 1994) and young children with severe disabilities across a variety of skills (Davis, Brady, Hamilton, McEvoy, & Williams, 1994; Horner, Day, Sprague, O'Brien, & Heathfield, 1991; Singer, Singer, & Horner, 1987). High-p requests have also been applied to academic settings. For example, use of such requests was effective in decreasing time to initiate an academic task after instruction and increasing time of engagement after beginning the task with an elementary-aged girl with learning disabilities (Wehby & Hollahan, 2000). In a related study, Ardoin, Martens, and Wolfe (1999) used high-p requests to decrease the latency to compliance to transition of three typically developing first-grade students.

Task Variation

The classroom use of task variation has a long history of success in increasing student rates of task acquisition and task attempts while also decreasing classroom behavior problems. This strategy consists of identifying tasks that a student has mastered and interspersing those tasks within an activity that is being taught for the first time. For example, working with adults with developmental disabilities, Winterling, Dunlap, and O'Neill (1987) identified multiple tasks that the participants had already mastered and were fluent in completing. Several of these tasks were then interspersed between new tasks. The participants finished a mastered task and then a new task. Winterling and colleagues reported an increase in task attempts and a decrease in problem behavior and number of trials to acquisition.

Our review of the literature revealed various theoretical explanations for the success of the strategies we have discussed. While further discussion is beyond the scope of our intent, all of these strategies use easier, well-established tasks to increase the participation or initial engagement of students or adults in a variety of activities. In the following case studies, we offer examples and a brief description of the application of each of these strategies to academic activities or settings.

Application Strategies

One application of the task variation strategy is the use of interspersed maintenance tasks with newly taught information. For example, in a class designed to support students with chronic or extreme problems in algebra and geometry, a high school math teacher embedded tasks in daily independent worksheets. The goal was to increase the number of correct responses, the number of attempts at the task, and on-task behaviors. Six of the students were receiving services for a learning disability and three were receiving services for E/BD. Classroom management was a teacher concern, as was the fact that the students exhibited problem behavior around task completion. All students (n = 14) in the class received the intervention.

The math teacher's class schedule typically consisted of devoting the first 5 to 10 minutes to reviewing the previous day's worksheet and the second 5 to 10 minutes reviewing the previous day's lesson. The teacher then spent 15 to 20 minutes presenting the day's new material and responded to questions for 5 to 10 minutes. When there were no more questions, the students were asked to complete a worksheet. The teacher modified the 20 problem worksheets to contain two easy, or already mastered, problems, followed by a problem focusing on the new content. The already mastered problems were not noticeably different or easier, in that they were taken from the unit of study immediately preceding the day's new concept. The data revealed little change in the students' rate of acquisition, but they did make more attempts to finish the worksheet and exhibited more on-task behavior.

The use of task variation was also replicated in an elementary classroom of nine students with E/BD. During math period, the students were given independent worksheets to complete. After the teacher appropriately identified the skills that the students had already mastered from previous units in the curriculum, items relating to those skills were interspersed into the worksheets containing newly taught items. It is interesting to note that when preparing for this study the teacher was sure she had targeted math skills that the

students had already mastered. However, when offered powerful reinforcers for completing the worksheets of already mastered tasks, the students demonstrated very little accuracy in completing them. This led the teacher to assume that the students had not mastered the tasks, so she sought to identify tasks that were definitely mastered. This highlights how critical it is that the skills singled out as mastered have been identified accurately.

Classroom instruction at the secondary level often consists of lecture and independent practice or demonstration of mastery of skills. Activities are rarely varied. In an attempt to reintegrate high school students with E/BD into the general education classroom, one teacher hypothesized that his students could not pay attention to a limited number of activities across an 80-minute period. He observed that teachers in the general education classroom typically lectured for 40 minutes and then required students to work independently for 40 minutes. He knew his students did not do well in this setting. However, when the 80-minute block of time was divided into four different activities, students' rates of attending and task completion increased. For example, the social studies teacher broke his class down into four distinct activities. The first 20 minutes were spent on discussing current events, the second 20 minutes on new instruction on the current textbook unit, the third 20 minutes on independent practice, and the final 20 minutes on reviewing the material or independent practice.

Other applications of high-p requests have been used to decrease the amount of time it took a young elementary-aged student to begin working on her independent worksheet (Wehby & Hollahan, 2000). After whole-class instruction on the day's math lesson, the teacher walked over to the target student and delivered three high-p requests (i.e., "Put your name on your paper." "How many problems are you going to complete?" "Point to number 1."). After the student responded to each of the requests, the teacher praised her for completing it. Immediately after delivering praise for the last high-p request, the teacher made the low-p request (i.e., "Finish your worksheet."). The use of high-p requests decreased the amount of time it took the student to begin the task and increased the

amount of time she stayed on task in the following 10 minutes after the request sequence.

This high-p request strategy has also been embedded within a larger task. In a classroom for first through third grade students with E/BD, the high-p requests were interspersed within the daily activities of the *Read Naturally* reading curriculum. The timed reading activities of this curriculum were task analyzed and separated into seven steps representing low-p requests. Before the teacher asked a student to complete a step in the activity, a high-p request sequence was delivered. For example, the high-p requests (i.e., "What are you reading about?" "Set the timer." "Put your finger on the first word.") were delivered immediately prior to asking the student to "Begin reading." (i.e., low-p request). As before, the use of the high-p request sequence resulted in decreases in the latency to begin responding to the request and thus decreased the amount of time it took to complete the task.

Practical Considerations

Each of the strategies we have discussed has a place in a teacher's repertoire of strategies to increase student academic engagement. However, the amount of effort it takes for a teacher to implement any one of these strategies varies. A critical component of using any of these strategies successfully is the identification of mastered tasks. To identify a set of tasks the student has mastered it is necessary for the teacher to have ongoing and accurate assessment information related to topics in the curriculum. This information can be obtained through the use of unit tests provided in the existing curriculum or through the ongoing use of curriculum-based measures.

A second consideration is the amount of time available to deliver the mastered or high-p requests. High-p requests typically take the form of verbal requests delivered to the student prior to asking him or her to begin a task. This requires the presence of a staff member to deliver the requests. On the other hand, interspersing mastered

tasks into a worksheet may require more preparation time, but it does not require more staffing to implement the strategy. In sum, this group of strategies represents just one curricular modification option for teachers to consider when attempting to influence academic engagement time and problem behavior.

4

Alternative Curriculum Modifications

As indicated earlier, there is often an inverse relationship between positive academic behaviors of students with E/BD and their disturbing social behaviors. Therefore, efforts to increase academic performance should be a priority, especially during reading instruction. Deficits in reading are particularly troublesome given that reading is essential to all other learning. Students must learn to read. Yet, without intervention, deficits in early literacy skills (e.g., phonemic awareness) grow over time to include deficits in decoding, fluency, and comprehension skills in later grades (Good, Simmons, & Smith, 1998; O'Shaughnessy, Lane, Gresham, & Beebe-Frankenberger, 2003). Poor readers spend substantially less time interacting with printed material than do strong readers. Consequently, strong readers continue to build their reading skills as they engage in more reading, become exposed to more vocabulary, and develop a love of reading, whereas poor readers do not establish the same momentum.

For many students with E/BD, both behavior and reading problems become increasingly stable over time (Kazdin, 1993; Walker & Severson, 2002). Often, teachers and administrators focus on preventing the deleterious consequences of a student's repertoire of expanding aggressive behaviors (e.g., moving from throwing trucks in a preschool classroom to throwing punches in a middle school classroom). However, there is good reason to focus also on prevent-

ing the negative consequences associated with the Matthew effect. Just as it is important to avoid reactive practices when managing students' behavior, it is also essential that schools move away from the "wait-and-see" model (Foorman, Francis, Shaywitz, Shaywitz, & Fletcher, 1997) characteristic of many schools. Instead, we must adopt a proactive approach for preventing reading problems in youngsters at risk for developing E/BD (Lane, Gresham, & O'Shaughnessy, 2002).

Today, there are a growing number of empirically validated procedures for identifying preschool and elementary students with emotional and behavioral problems who are at risk for developing E/BD (e.g., Systematic Screening for Behavior Disorders [SSBD], Walker & Severson, 1992; Student Risk Screening Scale [SRSS], Drummond, 1994). It is now possible to identify these youngsters and provide them more focused interventions during the "window of opportunity" when interventions are likely to produce the desired outcomes (Walker, Severson, & Feil, 1995) and when fewer skills are necessary to close the gap between current and desired levels of performance (O'Shaughnessy et al., 2002).

Supplemental Reading Intervention: The PATR Program

In this section, we will discuss the extent to which a supplemental reading intervention, *Phonological Awareness Training for Reading* (PATR; Torgesen & Bryan, 1994), was successful in improving the early literacy skills of preschool and early elementary students identified by their teachers as being at risk for developing E/BD. Specifically, we describe the use of the PATR program in first grade, kindergarten, and preschool classrooms, along with examples to illustrate its efficacy.

As we suggested, students' reading deficits can become increasingly stable, with the range of deficits broadening over time. Thus, early intervention with empirically validated intervention procedures is

essential. Fortunately, there are a host of treatment-outcome studies that have validated the impact of numerous reading programs with students with learning disabilities (e.g., *Peabody Peer Assisted Learning Strategies* [PALS], Fuchs, Fuchs, Mathes, & Simmons, 1997; *Phonological Awareness Training for Reading* [PATR], Torgesen & Bryant, 1994). In contrast, far less attention has been devoted to researching the use of such reading programs with students with E/BD (Wehby, Lane, & Falk, 2003a). In fact, only a handful of studies have examined the use of supplemental reading programs for students with or at risk for E/BD during the window of opportunity.

Among the relatively few investigations have been programs such as K-PALS, a kindergarten version of the traditional PALS program (Falk & Wehby, 2001), *John Shefelbine's Phonics Chapter Books* (Shefelbine, 1998; Lane, Wehby, Menzies, Gregg, Doukas, & Munton, 2002), and PATR (Lane, 1999; Lane, O'Shaughnessy, Lambros, Gresham, & Beebe-Frankenberger, 2001). The PATR program is a supplemental early literacy program designed to improve the phonemic awareness skills of kindergarten and first-grade students. Lessons focus on teaching young students to recognize how spoken language corresponds to given letters of the alphabet. The program is comprised of warm-up, rhyming, sound blending, sound segments, and reading and spelling activities.

Students begin by participating in a range of rhyming activities intended to focus their attention on word sounds. Then they are taught blending skills. First they blend onset and rime sounds (e.g., /s/ /un/) and then individual sounds (e.g., /s/ /u/ /n/). Next, segmenting activities are introduced by asking students to identify words (which are represented by pictures) with the same first sound. Then, they identify words with the same end and middle sounds. During the segmenting activities, proper positioning of mouth and tongue for each consonant phoneme is taught. Finally, reading and spelling activities are introduced with the use of letter cards. Students practice using letters (e.g., t) to represent phonemes (e.g., /t/) as they create words.

First-Grade Intervention

Lane (1999) conducted a school-based intervention with 39 general education first-grade students nominated by their teachers because of externalizing behavior problems and poor early literacy skills relative to classmates. Lane evaluated the outcomes associated with a supplemental reading program, PATR, and a customized social skills intervention designed to address acquisition deficits in academic, behavioral, and social domains. She found that students who engaged in the PATR intervention showed improvements in phonological awareness skills as measured by the Test of Phonological Awareness (TOPA; Torgesen & Bryant, 1994). However, despite the improvements in early literacy skills, students did not demonstrate significant improvements in social skills, nor did they exhibit consistent decreases in problem behaviors. Thus, the finding did not substantiate that improved early literacy skills would result in improved behavior. These findings are limited by the fact that social and behavioral performance was measured only from the teacher perspective using the SSRS. Direct observation and peer ratings were not used. Consequently, teachers may need to consider more sensitive outcome measures to detect more subtle changes in classroom and social behaviors.

A subsequent study by Lane and colleagues (2001) was designed to address the limitations of the Lane (1999) study. They used single-case methodology, a multiple baseline across intervention groups, to examine the effects of PATR with children with learning, conduct, and attention problems. First-grade teachers nominated students with low early literacy skills and externalizing behavior patterns that placed them at risk for E/BD. Students were screened to identify those whose conduct and attention problems exceeded gender norms on either the Critical Events Index (CEI; Walker & Severson, 1992) or the SSRS subscales. Seven students met the inclusion criteria.

Intervention groups met 3 days a week over a 10-week period to participate in 30-minute instructional sessions led by trained university research assistants using prepared lessons. Outcome measures included the Letter Naming Fluency subscale of Dynamic

Indicators of Basic Early Literacy Skills (DIBELS; Kaminski & Good, 1996), oral reading fluency probes developed from highly decodable texts, and direct observation of disruptive behavior in the classroom and negative social interactions on the playground (Walker & Severson, 1992), which were assessed weekly.

Results of this PATR investigation suggested that all students improved their word attack and oral reading fluency skills, with some students maintaining their newly acquired skills into follow-up phases. Yet, despite the progress in oral reading fluency, growth calculations indicated that most of the students did not grow at a rate proportionate to typically responding students. In terms of the behavioral measures, Lane and colleagues found that some students exhibited decreases in disruptive classroom behaviors. Thus, there may be an inverse relationship between improved decoding skills and disruptive behaviors with young general education students who are at risk. Moreover, it may be that improved decoding skills allowed these students to participate in the classwide literacy activities. Because the students were academically engaged, this may have reduced the amount of time available to engage in disruptive behavior. However, given the limited number of students and the brevity of the intervention, we must interpret these results with caution (Lane et al., 2001).

Kindergarten Intervention

The next step in this line of investigation focused on the feasibility and effectiveness of (a) implementing supplemental reading programs by school site personnel during the instructional day and (b) conducting PATR upon initial school entry with younger students with and at risk for E/BD. Lane, Fletcher, DeLorenzo, and McLaughlin (2003) explored the utility of PATR in a kindergarten classroom with three teacher-identified students with externalizing behavior problems and poor early literacy skills relative to their classmates. In this study, the general education teacher conducted the intervention during the literacy instructional block using a "centers" format. The three students were randomly assigned to two intervention groups in which seven other general education students participated. Each group of five students met for 30-minute

lessons 3 days a week for a 10-week period. As before, single-case methodology was applied to evaluate student progress. Research assistants monitored student progress using the Onset Fluency and Letter Naming Fluency subtests of DIBELS and conducted direct observations of classroom behavior and social interaction on the playground.

Results of the study indicated that this brief intervention was modestly effective in improving early literacy skills. As with the first-grade investigations, both Onset Fluency and Letter Naming Fluency skills improved. Despite some variability in baseline levels of disruptive behavior, all students showed decreases in disruptive behavior. Two of the three students also showed lower levels of negative social interactions on the playground. Despite these improvements, the teacher was not completely satisfied with the intervention. Nonetheless, this study provides some preliminary evidence that PATR, when used by classroom teachers to supplement ongoing instruction, can improve children's early literacy skills and lower their levels of undesirable behavior.

One unanswered question is whether or not this intervention could be effective with more severely affected students in the general education setting. Wehby, Lane, and Falk (2003b) attempted to answer this question within the context of a two-phase intervention study. Participants included eight kindergarten students, four of whom were teacher-nominated at-risk students and four of whom were full-time special education students with high-incidence disabilities who demonstrated E/BD. Students were randomly assigned to one of two intervention groups, with two at-risk and two special education students in each group. During the baseline phase, all students receiving special education services in a special day class were placed in a general education kindergarten class to participate in the district-wide literacy program. The literacy block was conducted 4 days a week for 75 minutes over the entire school year. All special education and general education students participated by rotating through four centers, each of which was led by school personnel (i.e., general educator, special educator, paraprofessional, second-language-learner instructor). Research assistants prepared the lesson plans.

The intervention phase of the study consisted of PATR lessons with the eight target students. Research assistants conducted the lessons in a special education classroom in the afternoons, convening for 20 minutes a day 4 days a week for a 9-week period. Outcome measures included the Nonsense Words Fluency, Initial Sound Fluency, and Letter Naming Fluency subtests of DIBELS, as well as Academic Engaged Time and Total Inappropriate Classroom Behavior assessed using a previously validated observation system (Multi Option Observation System for Experimental Studies; Tapp, Wehby, & Ellis, 1995). Weekly measures of early literacy and behavioral performance were collected.

Results indicated that students with and at risk for E/BD exhibited modest gains in early literacy skills by participating in the Scott Foresman and PATR lessons. Although there was variability in individual student performance, each of the students made some growth on early literacy skills and/or classroom behavior measures. Furthermore, a relatively consistent pattern of responding appeared to differentiate these two groups, with students at risk outperforming students identified with E/BD. Results of this study appear to support the additive benefits of PATR for both populations of students.

Use of PATR with Preschool Children

Viewed together, these studies suggest that supplemental programs are largely successful in producing gains in early literacy skills in kindergarten students with and at risk for E/BD. It appears that focused interventions are helpful in positively influencing early academic skills upon initial school entry. However, these findings beg the question, Can we improve the early literacy skills of youngsters with and at risk for E/BD even earlier, before formal schooling begins?

Lane, Wolery, Johnston, Mason, and Palombaro (2003) employed a multiple-baseline design to evaluate the effects of early literacy intervention using PATR on six preschool children's preacademic and classroom performance. The lead preschool teacher nominated children who were (a) at risk for school difficulties due to externalizing behaviors, (b) receiving special education services, and (c) typ-

ically developing. A second classroom teacher conducted the 20-minute PATR intervention sessions 3 to 4 days a week over a 9-week period. Once again, outcome measures included Onset Fluency and Letter Naming Fluency subtests (DIBELS) and behavioral observations of disruptive classroom behavior. Results were not consistent across children. Two children exhibited improved early literacy skills and co-occurring decreases in disruptive behaviors. However, the results suggest that children begin school with a range of skills in academic and behavioral domains; these differences between students (i.e., those at risk, those with special needs, typical) remain consistent. These results confirm that teachers can accurately identify preschoolers with sociobehavioral concerns.

Conclusion

Across the studies, findings suggest that the PATR program did produce additive benefits to the existing literacy programs that resulted in improved early literacy skills. In some instances (Lane et al., 2001; Lane et al., 2002; Lane et al., 2003; Wehby et al., 2003) these improvements were associated with decreases in behavior problems of first-grade and kindergarten students with and at risk for E/BD. However, results were less promising at the preschool level. Differences in outcomes may have been due to implementation issues (e.g., having a paraprofessional implement the intervention as opposed to university research assistants or certified teachers) or development issues (e.g., perhaps the intervention program was not developmentally appropriate for preschool-age children).

Although we cannot offer definitive conclusions regarding the preceding studies, there is enough evidence to suggest that students with and at risk for E/BD can benefit from explicit supplemental instruction in first-grade and kindergarten classrooms. Further research is needed to substantiate these findings and to explore more successful methods of improving the early literacy skills of this population of preschool children.

Conclusion 5

Both philosophical and pedagogical arguments have resulted in legislation to increase inclusion of students with disabilities, including those with E/BD, in all aspects of the general education curriculum. Accordingly, we have discussed various curricular and instructional modifications to the general education curriculum to enable students with E/BD to access and succeed in that curriculum. After briefly reviewing the literature on ways to modify and adapt curricular and instructional demands on students with E/BD, we presented three types of modifications that hold promise for producing positive outcomes. First, we suggested that classroom instruction might be modified to ensure that it aligns with research-based practice regarding effective instruction, particularly as related to ensuring that students are actively engaged in the teaching/learning process. Second, we presented case study examples of the use of embedding high-probability questions/directives to increase the active responding of students with E/BD and thereby increase the probability of accurate responses to low-probability, perhaps more difficult, requests. Finally, we introduced a supplementary, or alternative, reading curriculum for early intervention designed to decrease the likelihood of academic failure and concurrent undesirable social behavior.

Selecting Appropriate Modifications

Collectively, the modifications we have discussed represent realistic ways to present the general education curriculum to students with

E/BD. When these procedures are added to other strategies that have empirical support (c.f., Dunlap et al., 1993; Gunter, Denny, & Venn, 2000), teachers of students with E/BD have a range of possible modifications from which to select. However, based on the recent work of Helwig and Tindal (2003) and Miller and colleagues (2003), some caution needs to be applied to selecting which modification might be most appropriate for which students.

Helwig and Tindal found that teachers accurately predicted which students might benefit from a specific modification only about 50% of the time. In a similar study by Miller and colleagues, teachers also predicted and selected which modifications would effectively impact student performance. In this study, the modifications selected never had the full impact desired; they had to be modified for the students to benefit. These findings lead to what might be a critical issue regarding curricular modification, adaptation, or accommodation: The changes alone may not be enough to ameliorate student's academic difficulties entirely. Miller and colleagues reported that teachers may need to teach students to use the modifications to achieve the full impact of the intervention.

Monitoring Durability

Related to ensuring that students with E/BD can use the modifications is the need to evaluate their durability. Miller and colleagues cautioned teachers not to rely on short baseline and intervention effectiveness measures to evaluate the impact of adaptations, modifications, and accommodations. This caution primarily stemmed from the large degree of variability in students' academic and social behavior. For teachers of students with E/BD, this translates into the need to avoid making decisions regarding accommodation and modification effectiveness based on a single, or even a few, data points. This may be particularly important during the early days of an adaptation or accommodation. Gunter and King (2003) noted that a strong novelty effect may exist after curricular changes are implemented. They reported that often after a brief period of time—generally two to three sessions—improved student performance

that follows curricular changes is replaced by the preintervention level of performance. This finding suggests that teachers may need to closely monitor the early effects of adaptations and accommodations and be ready to modify the modifications to ensure maximal effectiveness.

There is a growing importance attached to exposing students with E/BD to the content of the general education curriculum. Doing so in a way that allows students to benefit academically and socially will no doubt require adaptations and accommodations of not only the curricular content, but its delivery as well. For that reason, we must continue to develop and evaluate ways to ensure that students with E/BD have access to the knowledge they need to be successful learners and thus have equal access to an ever-changing world.

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